

Problems with Ratios

1. Are the ratios equal? If not, indicate which is larger.

a. 7 women in 100 **or** 24 women in 400

b. 8:450 **or** 3:120

c. 1 farmer per 2,000 acres **or**
7 farmers per 10,000 acres

d. \$17 for 50 notebooks **or**
\$45 for 150 notebooks

2. Solve the proportions. (kWh is kilowatt-hour; RN is registered nurse)

a. $\frac{75 \text{ km}}{1 \text{ hr}} = \frac{460 \text{ km}}{x \text{ hr}}$	b. $\frac{\$0.14}{1 \text{ kWh}} = \frac{\$50}{x \text{ kWh}}$
c. $\frac{1 \text{ doctor}}{440 \text{ people}} = \frac{x \text{ doctors}}{1000 \text{ people}}$	d. $\frac{623.6 \text{ RNs}}{100,000 \text{ people}} = \frac{42,600 \text{ RNs}}{x \text{ people}}$

3. Jack and Jill started solving the following problem. Solve the proportions they set up. Did both of them solve it the right way?

An airplane travels at 560 km in 40 minutes. How long will it take to travel 1,600 km?

Jack's solution: $\frac{1600 \text{ km}}{560 \text{ km}} = \frac{x \text{ min}}{40 \text{ min}}$	Jill's solution: $\frac{560 \text{ km}}{40 \text{ min}} = \frac{1600 \text{ km}}{y \text{ min}}$
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4. Mr. Brooks plants his land in the following ratio:

3 banana : 1 mango : 2 orange. If his farming area is 500 acres, find how many acres he should plant with each type of fruit tree.

5. The total workforce of a certain state is 2,214,000 people. Of those, 7 in every 100 people are working in health care. How many people are working in health care?

6. If dog food costs \$0.88 per pound, how much dog food can you buy with \$100?